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ABSTRACT

Very little has been reported in the literature as tc how a child actually learns, but what is known can be put to mcre effective use in teaching the child to read. The brain has at least five input systems: sight, hearing, touch, taste, and smell. The first of these senses is employed more than the others in reading; however, it is believed that the more input centers used tc learn and consequently tc story in the memcry, the more efficient will be the retrieval of learning for future use. Three other important factors in learning and consequent retrieval are repetition, speed, and quantity of input. A method which makes use of two senses and can supply repetition, speed, and quantity without further burdening the teacher is the use of the tape recorder. By careful manipulation and measurement cf the process, the child can rapidly increase his vocabulary without pressure and with pleasure as he listens tc and reads from gocd trade books. This is, cf course, to be considered a supplemental teaching device. The teacher must still teach many of the basic skills, such as comprehensicn and word attack. (DH)

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READING AND THE NEW LEARNING THEORY

Session Wednesday, April 21, 1971
10:45-11:45 Room A, Convention Hall

By what method does the preschool child learn to read? As a matter of fact, by what method does a child learn to talk? We know that the first fifty words a child learns are taught by his mother who, much of the time, uses operant conditioning motivation in the form of food. After that first fifty words, how and where does the average child pick up the 16,000 plus words he possesses as a working vocabulary by the time he reaches the first grade?

The writer in the process of producing assistance for teachers in some management aspects of classroom operation, discovered, much to his amazement, that many children could be taught to read--rather, many children could teach themselves to read--reducing the trial and error process usually connected with the "basic sight reading approach" that has been prevalent for the

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last forty years.

HOW DOES ONE LEARN?

Having little experience with first grade or kindergarten children who learn to read without the guidance of the teacher, the author asked of himself and others, "How is it possible? Is there a better and easier way to teach beginning reading?"

Searching for answers in the field of learning, one turns to the psychologist. Try if you will to discover how <u>does</u> one learn. Now both the psychologist and the psychiatrist can give you any number of reasons why a child cannot learn. You will hear about alcoholic fathers, insecure mothers, sibling rivalry, grandparental overkill; but seldom will you hear a clear concise definition of the learning process in language one can understand.

WHO KNOWS?

Stranger still, turn to any book on psychology and search for a paragraph or a chapter on the mechanics of the learning process itself. Nowhere does one find the learning process described. Page after page, chapter after chapter are filled with words, but nowhere does it say, "this is the way one learns."

One must go back into history and find bits and pieces that, put together, bring into focus part of the picture. Piget, years ago, in dealing with a limited number of children, scratched the surface. Penfield the great neurosurgeon, in his masterful article, "The Uncommittee Cortex," touched the idea. The <u>Movement Exploration</u> research added a bit here and there; *neurological impress,*

as a teaching technique, brought additional light to the subject. The study of aphasia and various dyslexic dysfunctions lent some data. Finally, the computer experts and the neurosurgeons discovered that the brain is essentially a six volt data processing machine.

THE INPUT SYSTEM

In its bare essentials, the brain has at least five input systems; these are, obviously, the sense of sight, hearing, touch, taste and smell. Within the educational establishment the first three are preeminent. Within the brain there are reception centers that receive all images. Hearing is probably the most prolific input system; you cannot turn it off. Vision centers and the tactile kinesthetic centers account for the greater number of inputs. In man the senses of taste and smell have been blunted from under-use and neglect.

There are, however, subsidiary aspects. Apparently, from the receiving centers, data is exported to minor memory banks located around the brain. How many? No one knows! Do some people have more than others? No one knows! Maybe some people use more than others. Is this, then, intelligence?

Further than this all of these input systems seem to supplement and reinforce each other. They are to some degree reciprocal. Is this internal reinforcement a part of psychocybernetics? Much we know and much we do not know. For example, a baby's brain has a smooth exterior; why, with growth and maturation, does the brain develop the ever-present convolutions? The brain, much like a ball of yarn, has little feeling and little blood. What is more, one can still function with great portions of the organ missing.

Facts then, are stored in minor memory banks. How these travel to the frontal lobes is not clearly understood. We do know that the brain cannot be filled up. It never gets tired. It can be bored.

If you carefully research present day learning in the classroom, you will find that the major input system is visual; students read. The tactile-kinesthetic and aural inputs are seldom used and then usually as a remedial technic.

There is every reason to believe that those learnings that are pumped into the brain by two or more input systems simultaneously and stored in more than one memory bank, will be retrieved with greater ease than that data that is injected through only one input center. Mechanically it stands to reason that three heads are better than one.

THE RETRIEVAL SYSTEM

The retrieval system then,where recall is invoked and inference is obtained, is to a degree the "thinking/learning process." This marks the difference between the human brain and the mechanical computer. The brain can infer, in all shades and nuances. Up to now the computer does not infer. Someday, maybe!

In studying the learning process, certain factors of input and retrieval become important. *Repetition* is essential to learning. To memorize, which means to repeat until a fact becomes part of the organism pattern, is critical. Some children remember after one or two repetitions. Others take twenty, thirty, or forty times. Repetition can be sight, sound, or tactile-kinesthetically induced.

Quantity is essential also. The brain gets bored unless variety, to some extent, spices the learning process. The baby will babble the same sound again and again; as he grows older and as more sounds belong to his memory pattern scheme, the more discriminating he becomes.

Speed is also a major factor in learning. Too often we forget that the brain is operating at the speed of electricity somewhere in the neighborhood of 186,000 miles per second. How ludicrous then, to limit a child to four new words per day when by a different delivery system (input system) in the classroom, this learning level could be increased by five, ten, or one hundred times without strain. Obviously, this means input systems that are devoid of pressure, stimulated by pleasure, and have a high absorption rate.

If then we can find some simple input system that makes use of quantity, repetition, and speed and add this to the classroom operation, much of our learning problems would be erased. *One such method is the use of a tape recorder.* The writer has observed that without strain, a first grader can (with Q.R.S.) pick up the vocabulary and read with understanding as many as forty (40) simple trade books if the process is carefully manipulated and measured in the classroom.

Some of the burden of teaching is lifted from the shoulders of the teacher and the burden of learning is placed upon the shoulders of the child. The right delivery system will challenge the student without the competitive strain that accompanies the usual beginning reading process where there is much too much guessing going on.

THE TV AND THE OLD SILENT MOVIE

There is another factor in all of this that few people recognize. First, today the modern student is television trained. He knows all those little marks mean something. In fact, the TV tells him so. Even three year olds join in as the announcer sings the commercials, that, by the way, are printed as he sings along. Madison Avenue knows the value of a multisensory input system. They live or die by it. Ask anybody what "two mints in one" means; he can tell you that when he won't know who his Senator is.

Few people, looking deeply into the past, will recognize that the old silent moving picture theaters probably taught more children to read than did the local school marm. Every parent leaning over her child, read aloud the sub-titles. In fact, so many were whispering those sub-titles that everybody in the little theater heard and saw them on the screen at the same time. Ergo--multisensory input--the eye and the ear.

INGREDIENTS IN THE LEARNING PROCESS

The speed of the tape recorder lends another valuable ingredient to the learning process. Movement is an integral part of child life. It lends spice and variety, and keeps the senses alert.

Let's talk for a minute about the aphasic adult who has lost his power of speech. Retraining is a slow, tedious, emotional strain best achieved over a long period with the use of an isolation booth which eliminates the peripheral interference of the environment.

If, then, we use an isolation booth for the aphasic adult, is such a technic not valuable for the possible dyslexic child?

May we assume that one half of our problem readers are dyslexic? The minute you put on earphones, you are boxed into an isolation booth. Furthermore, if such a process works with children with deficiencies, how much more profitable will it be for the normal child?

Surely, we know that most of the successful classroom techniques of today found their origin in the special education classrooms of the past. "If it works for the disabled child, it will work wonders for the normal"--seems to be true.

Banking then on the findings that are available to us and some of the research of the neurologist, we find that the learning process can be sharpened in the classroom by a new delivery system. The teacher has not the time nor the ability to repeat, to teach three or four groups simultaneously. The tape recorder does--assuming that QRS (quantity, repetition and speed) is carefully measured.

THE TEACHER MULTIPLIER

With a tape recorder, and its intelligent usage, the teacher can multiply himself by two or even three with practice and imagination. Obviously, good trade books of the pre-primer, primer type will answer the need. The classic children's stories and some of the modern varieties will give the teacher an interest level not achieved by the so-called controlled vocabulary of the so-called basic reader.

Let's be sure again to understand that the use of the tape recorder is a supplemental teaching device. There is no "only" way to teach. It is the contention of the writer that the careful and continuing use of a tape recorder will for many children, cut down the grind of the "basic reader" approach that still makes

beginning reading difficult.

In fact, if you take the basic readers and run the students through them a few times on the tape recorder, you can go on to other more important technical reading problems such as comprehension, word attack skills, and speed--with speed.

THE FUTURE

The use of the tape recorder and our understanding of the basic premise that underpins its classroom application, is limited only by the imagination of the creative teacher. The writer recommends the tape recorder as a teacher aide without equal. One needs only to understand that the tape recorder meets the learning requirements to a greater degree than the teacher. It is the wise teacher who multiplies his talents and serves his students with the intelligent use of modern techniques.

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